

KATYSHEV, Yu. V.

DZHELEPCOV, V.P. FRIML, M., GERSHTEYN, S.S., KATYSHEV, Yu. V., MOSKALEV, V.I.,  
YERMOLOV, P. F.

"Experimental Investigation of  $\mu^-$  Mesonic Atomic Processes in  
Gaseous Hydrogen"

report presented at the Intl. Conference on High Energy Physics, Geneva,  
4-11 July 1962

Joint Inst. for Nuclear Research  
Lab. of Nuclear Problems  
Lab. of Theoretical Physics

ACCESSION NR: AP4042565

S/0056/64/046/006/2042/2045

AUTHORS: Dzhelepov, V. P.; Yermolov, P. F.; Katy\*shev, Yu. V.;  
Moskalev, V. I.; Fil'chenkov, V. V.; Friml, M.

TITLE: Catalysis of the nuclear  $d + d \rightarrow He^3 + n$  fusion reaction by  
negative muons

SOURCE: Zh. eksper. i teor. fiz., v. 46, no. 6, 1964, 2042-2045

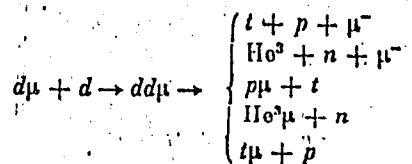
TOPIC TAGS: nuclear fusion, muon, mu meson catalysis, negative mu  
meson, hydrogen, deuterium

ABSTRACT: This is a continuation of earlier research on mesic-atom  
processes in gaseous hydrogen (V. P. Dzhelepov et al., Proc. 1962  
Intern. Conf. on High Energy Physics at CERN, Geneva, 1962, p. 484.  
V. P. Dzhelepov, At. energiya v. 14, 27, 1963. V. P. Dzhelepov et  
al., ZhETF v. 42, 439, 1962), and is aimed at observation of the  
previously unobserved reaction  $d\mu + d \rightarrow dd\mu \rightarrow He^3 + n + \mu^-$ . This

Card 1/3

ACCESSION NR: AP4042565

reaction is one of the fusion reactions



which were investigated earlier. The experimental conditions made it also possible to register reaction (1) and obtain some estimates of the yields of reactions (3) and (4). The tests were made with a diffusion chamber filled with deuterium to a pressure of 7.2 atm, where 20 events of the hitherto unobserved reaction (2) were detected. The ratio of the yields of reactions (2) and (1) is  $1.20 \pm 0.37$ . Estimates of the relative yields of reactions (3) and (4) give, with a probability of 90%,  $w(3)/w(1) < 0.13$  and  $w(4)/w(2) < 0.13$ . The yield of the reaction (1) agrees with the data obtained by the authors earlier, but the yields of reactions (1) and (2) measured in

Card 2/3

ACCESSION NR: AP4042565

the experiments exceed by one order of magnitude those that can be expected on the basis of the data on reaction (1) obtained in liquid deuterium by several authors. Estimates of the yield of reaction (5) call for additional data reduction and will be published later. Orig. art. has: 2 figures and 5 formulas.

ASSOCIATION: Ob'yedinenny\*y institut yaderny\*kh issledovaniy (Joint Institute of Nuclear Research)

SUBMITTED: 10Feb64

DATE ACQ:

ENCL: 00

SUB CODE: NP

NR REF SOV: 003

OTHER: 005

Card 3/3

KATYSHEV, Yu.V.; NOVIKOV, D.L.; POLFEROV, E.A.; DMITRIYEVSKIY,  
V.P., prof., doktor fiz.-mat. nauk, red.; KRASNOBRODSKAYA,  
L.L.; red.; BOGATOVA, V.N., red.-leksikograf

[English-Russian dictionary on charged particle accelerators]  
Anglo-russkii slovar' po uskoritsliam zariazhennykh cha-  
stits. Moskva, Sovetskaiia entsiklopediia, 1965. 323 p.  
(MIRA 18:10)

*KATYSHEVA A. V.*  
EXCERPTA MEDICA Sec 7 Vol 13/4 Pediatrics Apr 59

913. A GENERALIZED VIRAL DISEASE OF THE SALIVARY GLANDS IN A  
25-DAY-OLD CHILD (Russian text) - Katysheva A. V. - PEDIATRIYA  
1958, 34 (11-14) Illus. 4

The infant died on the 25th day of life, with symptoms of cardiac insufficiency.  
Postmortem examination revealed pneumonitis and haemorrhages in the visceral  
pleura. Giant cells were found, with cytomegaly in the kidneys, brain and lungs.  
Anigstein - Galveston, Tex. (L, 7)

*Children's Hospital #11; Gerasimovskogo  
rayon - Moscow*

*Pathoanatomical dept - Children's Clinic  
Hospital No. 2, in I.V. Rusakov.*

VISHNEVETSKAYA, L.O.; VOYT, Ye.B.; KATYSHEVA, A.V.

Morphological changes in the lungs in Pneumocystis carinii pneumonia.  
Pediatriia 37 no.9:31-32 S '59. (MIRA 13:2)

1. Iz patologoanatomicheskogo otdeleniya (zaveduyushchiy - doktor  
med.nauk L.O. Vishnevetskaya) Detskoy klinicheskoy bol'nitsy No.2  
imeni Busakova (glavnyy vrach - zasluzhennyy vrach RSFSR dotsent  
V.A. Kruzhkov).

(PNEUMONIA INTERSTITIAL PLASMA CELL pathol.)

VISHNEVETSKAYA, L.O.; VOIT, Ye.B.; KATYSHEVA, A.V.

Morphology of intestinal disease in children in the first  
months of life caused by pathogenic strains of Escherichia  
coli. *Pediatrics* 38 no.1:27-31 '60. (MIRA 13:10)  
(ESCHERICHIA COLI) (INTESTINES—DISEASES)



VISHNEVETSKAYA, L.O., doktor med.nauk; VOYT, Ye.B.; KATYSHEVA, A.V.;  
RABINOVICH, D. Ya; FRIDMAN, E.Ye.; SHALEVICH, M.A.

Morphology of intestinal diseases caused by pathogenic strains  
of *Escherichia coli* in children a few months old. *Pediatrics* 38  
no.4:27-31 Apr '60. (MIRA 16:7)  
(*ESCHERICHIA COLI*)

KATYSHEVTSEVA, V.G.; LEONOVA, N.V.

Some data on the study of rhubarb in the Karagunda Botanical Garden.  
Trudy Inst.bot.AN Kazakh.SSR 17:128-134 '63. (MIRA 17:3)

KATYSHEVTSEVA, V. G.

"Flora of the Coast of the Caspian Sea Between the Volga and the Ural Rivers." Acad. Sci. Kazakh SSR, Inst. of Botany, Alma-Ata, (1955). (Dissertation for the Degree of Candidate of Biological Sciences)

SO: Knizhnaya Letopis', No. 22, 1955, pp 93-105

KATYSH E V TSEY A, Y. E.  
KATYSHEVTSEVA, V.G.

Geobotanical description of the northern coast of the Caspian Sea.  
Trudy Inst. bot. AN Kazakh. SSR 5:30-88 '57. (MLBA 10:9)  
(Caspian Sea region--Phytogeography)

KATYSHEVTSEVA, V.G.

Alternations in the plant cover along the northern shore of the  
Caspian Sea. Trudy Inst.bot.AN Kazakh.SSR 8:43-85 '60. (MIRA 13:10)  
(Caspian Depression--Plant succession)

KATYSHEVTSEVA, V.G.

Rhubarbs in the Karaganda Botanical Garden. Trudy Inst.bot.AN  
Kazakh.SSR 14:157-169 '62. (MIRA 16:4)  
(Karaganda--Rhubarb)

USSR/Medicine - Arsenic and Arsenic  
Compounds

May 49

Medicine - Drugs

"Polymeric Arseno Compounds," M. Ya. Kraft, V. V.  
Katyshkina, All-Union Sci Res Chemtophar Inst  
Imeni S. Ordzhonikidze, 3 pp

"Dok Ak Nauk SSSR" Vol LXVI, No 3

It has been previously shown by determining molecular  
weight of certain forms of salarsen that it is a  
polymeric compound. Mixtures of arseno compounds  
are not explained by the old viewpoint. Obtaining  
such compounds is a corroboration of their

52/49150

May 49

USSR/Medicine - Arsenic and Arsenic  
Compounds (Contd)

Polymeric structure. Submitted by Acad A. N.  
Kiselevich, 14 Mar 49.

52/49150

KATYSHKINA, V. V.

USSR/Chemistry - Phosphorus Organic  
Compounds

Oct 52

"Concerning the Reaction for Preparing Chlorides of Aromatic Esters of Phosphoric Acid. A New Type of Cationic Catalysis," M. Ya. Kraft, V. V. Katskina, All-Union Sci Res Chemico-pharmaceutical Inst im S. Orkzhonikidze

DAN SSSR, Vol 86, No 4, pp 725-728

In studying the reaction between phenols and  $\text{POCl}_3$ , it was noticed that in some expts the reaction would not give satisfactory results but in others the reaction proceeded at a satisfactory speed.

264T17

It was found that acceleration was due to impurities in the starting materials, namely, the presence of cationic catalysts, such as Na, extracted from the glass of the reaction vessel. Using NaCl catalyst, chlorides of the following esters were prepared: m-nitrophenol ester of phosphoric acid, p-nitrophenol ester of phosphoric acid, 2,4-dinitrophenol ester of phosphoric acid, and 2,4,6-trinitrophenol ester of phosphoric acid. Presented by Acad A. N. Nesmeyanov.



KATYSHKINA, V. V.

USSR/Chemistry - Oxidation

Card 1/1 Pub. 22 - 24/47

Authors : Kraft, M. Ya., and Katyshkina, V. V.

Title : Oxidation of salvarsan and novarsenol with elementary oxygen

Periodical : Dok. AN SSSR 99/1, 89-92, Nov 1, 1954

Abstract : The oxidation reactions of salvarsan and novarsenol, which is a product of the reaction between salvarsan and rongalite (formaldehyde addition product), is described. It was established that As in the novarsenol serves as an oxygen carrier and that novarsenol is capable of catalyzing such substances which are capable of reducing arsenoxide type compounds. The toxicity of novarsenol, when exposed to air, is discussed. Ways of protecting novarsenol against the effects of air are listed. Six references: 5-German and 1-USSR (1910-1949). Table; graph.

Institution : The S. Ordzhonikidze All-Union Scientific Research Chem-Pharmaceutical Institute

Presented by: Academician A. N. Nesmeyanov, June 11, 1954

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1/ Preparation of slides and covers of slides

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**CIA-RDP86-00513R000721210005-3"**

KRAFT, N Ya.; KATYSHKINA, V.V.

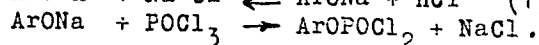
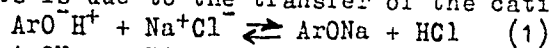
Reactions in carboxylic acid - thionyl chloride systems. New type of cationic catalysis. Dokl. AN SSSR 109 no.2:312-314 J1 '56. (MLRA 9:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni S.Ordzhonikidze. Predstavleno akademikom A.N. Nesmeyanovym. (Acids, Fatty) (Thionyl chloride)

AUTHORS: Kraft, M. Ya., Katyshkina, V. V. SOV/79-29-1-14/74  
 TITLE: A New Type of Cation Catalysis (Novyy tip kationnogo kataliza)  
 II. The Reaction of Carboxylic Acids With Phosphorus Tri-  
 chloride (II. Reaktsiya karbonovykh kislot s trekhkhlorstym  
 fosforom)

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 1, pp 59-63 (USSR)

ABSTRACT: The authors have previously shown that neutral salts (NaCl, KCl and others) may act as very active catalysts in several organic reactions. They discovered this property in connection with the reaction of phenols with  $\text{POCl}_3$  (Refs 1, 2).  $\text{POCl}_3$  reacts easily and promptly in the presence of neutral salts, even with those phenols that are otherwise not reactive (nitro-phenols, picric acid). The dependence of reaction acceleration on the constant of dissociation of phenol led to the assumption that the mechanism of the catalytic effect of the neutral salts is due to the transfer of the cation:



Card 1/3

It was assumed that this catalytic activity of the neutral

SOV/79-29-1-14/74

## A New Type of Cation Catalysis. II. The Reaction of Carboxylic Acids With Phosphorus Trichloride

salts might also occur in several other reactions. In fact, its effect was also found in the reaction of carboxylic acids with thionyl chloride (Ref 3). It was a quite natural thing to substitute the latter by  $\text{PCl}_3$ . Although this substitution had

already been known for a long time (Ref 6) (e. g. in the case of the synthesis of chloric acid anhydrides of carboxylic acid) no details have hitherto been published concerning the mechanism. Anyway, the different processes (4) (5) (6) (7) of this reaction show that no details have hitherto been known about it. Also in this case the reaction acceleration depends to a great extent upon the dissociation constant of the acid. It is highest in the case of strong acids. If trichloroacetic acid is used the constant of reaction speed grows e. g. by the fourteen fold, in the case of monochloroacetic acid it grows only by the four fold. The authors are of the opinion that the possibility of a catalytic acceleration of the above reaction by means of neutral salts may be best explained by the reaction process (6) according to Lucas, Pressman (Ref 7).

Kinetics of the reaction of carboxylic acids with  $\text{PCl}_3$  is shown

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SC7/79-29-1-14/74

A New Type of Cation Catalysis. II. The Reaction of Carboxylic Acids With  
Phosphorus Trichloride

in the figure. There are 1 figure and 10 references, 3 of  
which are Soviet.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevti-  
cheskiy institut imeni S. Ordzhonikidze (All-Union Chemo-  
Pharmaceutical Scientific Research Institute imeni S. Ordzho-  
nikidze)

SUBMITTED: May 14, 1958

Card 3/3

AUTHORS: Katyshkina, V. V., Kraft, M. Ya. SOV/79-29-1-15/74

TITLE: A New type of Cation Catalysis (Novyy tip kationnogo kataliza)  
 III. Reactions of Chloric Acid Anhydrides of Carboxylic  
 Acids With Acids and Phenols (III. Reaktsii khlorangidridov  
 karbonovykh kislot s kislotami i fenolami)

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 1, pp 63-68 (USSR)

ABSTRACT: Basing on previous papers (Refs 1-4) on the catalytic role  
 of neutral salts in several organic reactions, two reactions  
 are described in the present case.  

$$\text{RCOOH} + \text{RCOCl} \rightarrow (\text{RCO})_2\text{O} + \text{HCl}$$

$$\text{ArOH} + \text{RCOCl} \rightarrow \text{ArOCOR} + \text{HCl}$$
 Both reactions correspond to the conditions under which a  
 catalytic activity of neutral salts may proceed (Ref 1); one  
 component of acid character can thus participate in the  
 transference of the cation and the other possesses a mobile  
 halogen atom. The first reaction does not only make possible  
 a further field of application of the new type of cation  
 catalysis discovered by the authors but also offers a method  
 for the synthesis of acid anhydrides. The catalytic effect of  
 neutral salts in reactions of carboxylic acids with chloric

Card 1/3



A New Type of Cation Catalysis. III. Reactions of Chloric Acid Anhydrides  
of Carboxylic Acids With Acids and Phenols

SOV/79-29-1-15/74

acid anhydrides was investigated in many cases. As in earlier cases (Refs 1, 2), the reaction kinetics was judged according to the speed of precipitation of HCl. Figure 1 gives the results. Thus, it can be seen that the greatest reaction acceleration takes place in trichloroacetic acid in the case of an addition of KCl. Without a catalyst, however, it is reduced by its six fold. This is a confirmation of the already earlier found regularity (Refs 1-4) also in the reaction of carboxylic acid with its chloric acid anhydrides. Also in the latter case the catalytic activity of the neutral salts depends highly upon the dissociation constant of one of the components. The experiments gave high yields in acid anhydrides (especially with a great excess of acid chloride) so that this reaction can be recommended as a preparative method of synthesis. The use of the cation catalysis in alkylation reaction of phenols was investigated in the case of reaction of 2,4-dinitro-phenol with the chloric acid anhydrides of chloroacetic- and butyric acid. Figure two gives the results. As this reaction acceleration with neutral salts depends upon the dielectric

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SOV/79-29-1-15/74

A New Type of Cation Catalysis. III. Reactions of Chloric Acid Anhydrides of Carboxylic Acids With Acids and Phenols

constants of the chloric acid anhydride of carboxylic acid an ion mechanism of catalytic activity is thus implied and the above mentioned regularity is confirmed.

There are 2 figures, 1 table, and 11 references, 8 of which are Soviet.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni S. Ordzhonikidze (All-Union Scientific Chemo-Pharmaceutical Research Institute imeni S. Ordzhonikidze)

SUBMITTED: May 14, 1958

Card 3/3

KATYSHKINA, V.V.; KRAFT, M.Ya.

New type of cation catalysis. Part 4: Catalytic effect of phosphorus pentachloride in the reaction of phenols with phosphoryl chloride. Zhur.ob.khim. 32 no.9:3096-3098 S '62.  
(MIRA 15:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni S. Ordzhonikidze.  
(Phosphorus chloride) (Phenols) (Phosphoryl chloride)

KATYSHINA, V.V.; KURT, V.G.; KAPLAN, S.A.

"Measurements of scattered U.V. radiation (1216A and 1300A) in the upper atmosphere." (USSR)

Report submitted for the COSPAR Fifth International Space Science Symposium, Florence, Italy, 8-20 May 1964.

KATYSHKINA, V.V.; GOI'TSOVA, R.G.; KRAFT, M.Ya.

Chemistry of nitranol and its production. Khim. i med. no.16:  
11-14 '61. (MIRA 17:8)

DMITRIYEV, A.B.; KATYUSHINA, V.V.; SOROKIN, L.S.

Ionization chamber and counter for recording the emission in  
the H<sub>l</sub> line. Prib. i tekhn. eksp. 9 no.4:81-84, J1-Ag '64.  
(MIRA 17:12)

1. Institut prikladnoy geofiziki AN SSSR.

radiation counter

ABSTRACT: Photon counters used in investigations of scattered UV radiation in the upper atmosphere are described. The two counters, of the SFM-1-type, are placed

Card 1/2

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CIA-RDP86-00513R000721210005-3"



ACC-1

AUTHOR: Katyushina V.

TITLE: Measurements of the scattered  $\gamma$ -radiation  
at the height of 500 km

no. 2, 1965.

second counter  $\gamma$ -radiation  
first flight measurement

dependent. During the second and third Absolute values of the radiation

**APPROVED FOR RELEASE: 06/13/2000**

**CIA-RDP86-00513R000721210005-3"**



ACC NR: AP6034263

(N)

SOURCE CODE: UR/0390/66/029/005/0597/0600

AUTHOR: Kraft, M. Ya.; Katyshkina, V. V.; Pershin, G. N.; Bogdanova, N. S.

ORG: All-Union Scientific Research Chemical and Pharmaceutical Institute im. S. Ordzhonikidze, Moscow (Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut)

TITLE: Cyclic oxocompounds as potential antiviral agents

SOURCE: Farmakologiya i toksikologiya, v. 29, no. 5, 1966, 597-600

TOPIC TAGS: cyclic oxocompound, antiviral agent, drug effect, pharmacology, *virus, virology, nucleic acid, protein*

ABSTRACT: The antiviral properties of the compounds in Table 1 were determined. These compounds were tested on influenza RR-8 type A virus *in vitro* and *in ovo* in tissue cultures. All possessed antiviral activity *in vitro* and some inhibited viral growth in chick embryo epithelium. These cyclic oxocompounds are highly reactive and are thought to produce their inhibitory activity by acting on viral protein in such a way that the viruses cannot adhere to the cell membranes of sensitive cells. Related compounds have been effective against keratitis infections when applied locally. Quinone derivatives with comparatively low redox po-

Card 1/3

UDC: 615.753.5-017.78+616.988-085.753.5

ACC NR: AP6034263

Table 1. Activity of mono- and bicyclic compounds

No.	Compound	Activity in vitro	No.	Compound	Activity in vitro
I		++	IX		+
II		+++	IX		+
III		++++	IX		+
IV		+	IX		+
V		+	IX		+
VI		+	IX		+
VII		+	IX		+
VIII		+	IX		+
IX		+	IX		+

### Explanation of symbols

0 - compound inactive in dilutions of 1:1000;  
+ - compound active in dilutions of 1:1000;  
++ - compound active in dilutions of 1:10000;  
+++ - preparation active in dilutions of  
1:100000; ++++ - preparation active in dilu-  
tions of 1:1000000; +++++ - preparation active  
in dilutions of 1:10000000

**Card 2 / 3**

ACC NR: AP6034263

entials have been discovered to possess good antiviral properties, thus refuting a theory that antiviral activity and high Eh were connected. The compounds involved in the present study were tested more for their effects on amino groups of nucleic acids and proteins with emphasis on their extracellular interference with the virus and only secondarily for their intracellular effects on reproducing viruses. The object was to find a compound that reacts easily with viral protein but which is comparatively indifferent to the protein of the host cell. The configuration of the molecule of the compound is very important and plays a great role in the specificity of the drug. Little antiviral activity was displayed by 4-hydroxy-beta-napthoquinone and its tautomeric form 2-hydroxy-alpha-napthoquinone. The most effective compound was 7-hydroxy-beta-napthoquinone. The activities of the other compounds tested are shown in Table 1. The most effective virus neutralizing compounds (no. I, II, III, VIII, XI, and XV) were used in the treatment of pneumonia in white mice, but were not effective. Orig. art. has: 1 table. [W.A. 50]

SUB CODE: 06/ SUBM DATE: 20Dec65/ ORIG REF: 002/ OTH REF: 005

Card 3/3

18.12.80

28547  
S/137/61/000/009/019/087  
A060/A101

**AUTHORS:** Chipizhenko, A.I., Katyshkova, A.Ya., Golubkov, M.K.  
**TITLE:** Tendency of copper-beryllium alloys to form blisters under heating in an ammonia environment  
**PERIODICAL:** Referativnyy zhurnal. Metallurgiya, no. 9, 1961, 41, abstract 9D305 ("Tr. Gos. n.-i. i poyektn. in-ta po obrabotke tsvetn. met.", 1960, no. 18, 197-208)

**TEXT:** The influence of the chemical composition of bronze upon the tendency to form blisters under heating in an ammonia environment was investigated. Strips of bronze grades Бр.Б 2.5 (Br.B 2.5) containing (in percent): Be 1.53-2.43, Ni 0.18-0.49, and admixtures of Ti 0.18-0.73 and Co 0.3; БНТ 1.9 and БНТ 1.7 (BNT 1.9 and BNT 1.7) were heated in an ammonia environment at 770-780 and 820°C. (for the latter two grades) for various periods of time. It was established that standard bronze grade Br. B 2.5 is most apt to form blisters. Under heating for the period of one hour in strips with an addition of 0.28-0.73% Ti the blisters did not arise. On strips of bronze containing 1.68-2.32% Be and an admixture of Ti no blisters were formed even after a two-hour heating. Under heating of strips

Card 1/2

X



28547

S/137/61/000/009/019/087

AO60/A101

Tendency of copper-beryllium alloys ...

in a  $H_2$  atmosphere at  $820^{\circ}C$  for 20 min no blisters were formed on strips of bronze containing an admixture of Ti with Ni, while on strips of bronze Br. B 2.5 a large number of blisters was formed. It is indicated that the formation of blisters on strips of beryllium bronze under heating in an ammonia atmosphere is connected with defects in the ingot and the action of  $H_2$  from the surrounding environment. An admixture of Ti reduces the tendency of strips to form blisters. It is recommended to carry out the casting of beryllium bronze ingots by the semicontinuous or flowless method, and not to allow a heating  $> 780^{\circ}C$  and long soakings in annealing strips or parts in an ammonia environment.

A. Babayeva

JK

[Abstracter's note: Complete translation]

Card 2/2

KATYUKHIN, B.P., insh.

New hydraulic drive for one-bucket excavators. Biul. tekhn. inform.  
4 no.5:20-22 My '58. (MIRA 11:8)

(Excavating machinery)

ADMINISTRATIVE PAGE 1

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KATYUKHIN, N.Ya.; ZHDANOV, N.S.

Conference on intestinal diseases and parasites . Zdrav.Ros.  
Feder. 3 no.8:44-45 Ag '59. (MIRA 12:11)

1. Korrespondent zhurnala "Zdravookhraneniye Rossiyskoy Federatsii"  
(for Katyukhin). 2. Zaveduyushchiy epidemiologicheskim otdelom  
Khabarovskogo instituta epidemiologii i gigieny (for Zhdanov).  
(INTESTINES--DISEASES--CONGRESSES)

KATYUKHIN, N.Ya.; ZHUZHCHALKIN, A.P.

Some results of the work under new conditions. Zdrav. Ros. Feder.  
4 no.3:19-22 Mr '60. (MIRA 13:5)

1. Iz Amurskogo oblzdravotdela.  
(TAMBOV DISTRICT (AMUR PROVINCE)--PUBLIC HEALTH, RURAL)

KATYUKHIN, N.Ya.

Interdistrict conference of medical personnel. Zdrav. Ros. Feder.  
4 no.8:42-44 Ag '60. (MIRA 13:9)

1. Kortespondent zhurnala "Zdravookhrananiye Rossiyskoy Federatsii."  
(AMUR PROVINCE—MEDICAL PERSONNEL)

OBUKHOV, P.F.; KATYUKHIN, N.Ya.

Activity of the Amur Province Society of Hygienists, Sanitation  
Specialists, Epidemiologists, Microbiologists, and Specialists in  
Infectious Diseases. Zdrav. Ros. Feder. 4 no.7:45-46 Je '60.  
(MIRA 13:9)

(AMUR PROVINCE—PUBLIC HEALTH)



SHEVCHENKO, N.F., otv. red.; BABAYEVA, Ye.K., red.; BELOUSOV, Ye.K., red.; VINNIK, S.A., prof., red.; GERSHEVICH, S.A., red.; IOSSET, G.Ya., prof., red.; KATYUKHIN, N.Ya., red.; KISELEVA, A.S., red.; MENSCHIKOVA, L.I., red.; NADGERIYEV, M.K., dots., red.; OBUKHOV, P.F., red.; RUTENBURG, D.M., red.; FAYN, M.A., dots., red.; OVECHKINA, L.S., red.

[Public health in Amur Province; collection of articles]  
Zdravookhranenie Amurskoi oblasti; sbornik statei. Blagoveshchensk, Amurskoe knizhnoe izd-vo, 1962. 236 p.

(MIRA 17:7)

1. Amur (Province) Otdel zdravookhraneniya. 2. Zaveduyushchiy Gosptal'noy khirurgicheskoy klinikoy Blagoveshchenskogo meditsinskogo instituta, Amurskaya oblast' (for Iosset). 3. Blagoveshchenskiy meditsinskiy institut, Amurskaya oblast' (for Obukhov). 4. Zaveduyushchiy Klinikoy obshchey khirurgii Blagoveshchenskogo meditsinskogo instituta, Amurskaya oblast' (for Nadgeriyev). 5. Zaveduyushchiy Kafedroy otorinolaringologii Blagoveshchenskogo meditsinskogo instituta, Amurskaya oblast' (for Vinnik). 6. Zaveduyushchiy Kafedroy sudebnoy meditsiny Blagoveshchenskogo meditsinskogo instituta, Amurskaya oblast' (for Fayn).

MESHKOVY, N.P.; KUZ'YAKIN, Yu.I.; KATYUKHIN, V.Ye.; CGEREDINOV, N.M.

Independent data input on the magnetic drum of the "Ural-2"  
electronic digital computer. Biul.tekh.-ekon.inform.Gos.nauch.-  
issl.inst.nauch. i tekhn.inform. 16 no.10:47-49 '63.  
(MIRA 16:11)

KATYUSHCHENKO, S.K.

Efficient limits in using truck haulage in open pits. Gor. zhur. no.7:  
62 JI '62. (MIRA 15:7)

1. Ispolnyayushchiy obyazannosti direktora Gosudarstvennogo instituta  
po proyektirovaniyu gornykh predpriyatiy zhelezorudnoy i margantsevoy  
promyshlennosti i promyshlennosti nemetallicheskih iskopayemykh,  
Leningrad.

(Mine haulage)

KATYUSHCHENKO, S.K.

Research carried out by the State Institute for the Design and  
Planning of Establishments of the Ore Mining industry. Cor.zhur.  
no.4:13-15 Ap '64. (MIRA 17:4)

1. Glavnyy inzhener Gosudarstvennogo soyuznogo instituta po  
proyektirovaniyu predpriyatiy gornorudnoy promyshlennosti.

NEYMAN, M.B.; FEKLISOV, G.I.; Primal uchastiye: KATYUSHIN, A.A.,  
student

Kinetic tracer method for investigations on the mechanism of  
complex chemical and biochemical processes. Part 10: Rate  
constant of the reaction between an acetyl radical and mole-  
cular oxygen. Zhur. fiz. khim. 35 no.5:1064-1067 My '61.  
(MIRA 16:7)

1. Institut khimicheskoy fiziki AN SSSR (for Neyman, Feklisov).
2. Gor'kovskiy gosudarstvennyy universitet (for Katyushin).  
(Acetaldehyde) (Carbon oxide)  
(Chemical reaction, Rate of)

KATYUSHIN, M. [Katsiushyn, M.]

"The measure of time; a tale" by L.Arabei. Reviewed by M.Katsiushyn.  
Rab,i sial. 38 no.12:20 D '62. (MIRA 16:1)  
(Arabei, Lidziia)

KATYUSHIN, Yu.I., inzhener.

Work experience in automatic welding using copper sliding blocks.

Sudostroenie 22 no.11:35-38 N '56.

(MLRA 10:2)

(Electric welding)

3,5000

87976

S/049/60/000/010/014/014  
E032/E414

AUTHOR: Katyushina, V.V.

TITLE: On the Absorption of Solar  $H\alpha$  Emission in the  
Earth's Atmosphere

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya geofizicheskaya,  
1960, No.10, pp.1549-1552

TEXT: One of the strongest lines in the ultraviolet part of the solar spectrum is the  $L_{\alpha}$  line of hydrogen  $\lambda = 1215.7 \text{ \AA}$ . According to the latest rocket measurements, the intensity of this line is 1 to 5 erg/cm<sup>2</sup> sec. Rocket experiments show that this radiation is strongly absorbed in the Earth's atmosphere at altitudes of 75 to 110 km. However, it is still not clear which component of the atmosphere is responsible for the absorption of  $H\alpha$  radiation. It is suggested that the problem may be settled by studying the variation in the intensity of the line with altitude. The variation of the intensity with altitude follows the usual exponential law

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E032/E414

On the Absorption of Solar  $H\alpha$  Emission in the Earth's Atmosphere

Eq.1.

$$\frac{J_{\lambda}^{\text{II}}}{J_{\lambda}^{\text{I}}} = e^{-k_{\lambda}m} = e^{-\sigma_{\lambda}N}, \quad (1)$$

where  $J_{\lambda}^{\text{I}}$  is the intensity of radiation entering a layer of the atmosphere having a mass  $m$  and containing  $N$  molecules and atoms,  $J_{\lambda}^{\text{II}}$  is the intensity after passing through the layer,  $k_{\lambda}$  is the mass absorption coefficient and  $\sigma_{\lambda}$  is the absorption cross-section. To begin with, the present author discusses the absorption of  $H\alpha$  radiation by atomic hydrogen. The presence of atomic hydrogen in the atmosphere is suggested by the fact that  $L_{\alpha}$  emission takes place in atmospheric layers below 120 km (Kupperain et al, Ref.9). Here, Eq.(1) cannot be used directly since the absorption coefficient is not constant. One must take into account the fact that the absorption coefficient changes rather rapidly from the centre of the line towards the wing. It is therefore necessary to

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S/049/60/000/010/014/014  
EO32/E414

# On the Absorption of Solar $H\alpha$ Emission in the Earth's Atmosphere

know both the profile of the solar line and the variation of the absorption coefficient of atomic hydrogen with wavelength within the line. In the present calculations it is assumed that the solar line has a Doppler profile so that the energy contained in the line after passing through a layer containing absorbing atoms may be written down in the form

Eq.2. 
$$\exp\left[-(\lambda - \lambda_0)^2 / \Delta\lambda_D^2\right] dk_p - \bar{I} = J_0 \int_{-\infty}^{+\infty} \exp\left[-\frac{(\lambda - \lambda_0)^2}{\Delta\lambda_D^2}\right] k(\lambda) d\lambda. \quad (2)$$

where  $k(\lambda)$  is the absorption coefficient,  $J_0$  is the maximum intensity of the line and  $\Delta\lambda_D$  is the Doppler width. It is shown in the present paper that if  $H\alpha$  radiation is absorbed only by atomic hydrogen and molecular oxygen, then the expression for the radiant energy recorded at an altitude  $h$  is given by

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E032/E414

On the Absorption of Solar  $H\alpha$  Emission in the Earth's Atmosphere

Eq.5.

$$W(h) = 0.478 J_0 e^{-1.51 \cdot 10^{-4} \sqrt{N_H(h)} - \sigma_{O_2} N_{O_2}(h)} \quad (5)$$

where  $N_H$  and  $N_{O_2}$  are the number of particles of hydrogen and oxygen respectively. Next the author considers the absorption of  $H\alpha$  radiation by NO molecules. The photo-ionization threshold at  $\lambda_0 = 1340 \text{ \AA}$  and the cross-section  $\sigma$  in the region of  $1200 \text{ \AA}$  is  $1.4 \times 10^{-18} \text{ cm}^2$  (Watanabe et al, Ref.11). The present author has used published data to calculate the concentration of hydrogen and NO in the atmosphere in the altitude range 85 to 100 km. These calculations suggest that the variation in the intensity of  $H\alpha$  with altitude may be explained by the presence of water vapour with a relative concentration of  $10^{-4}$ , or atomic hydrogen with a concentration of  $10^{10} \text{ cm}^{-3}$ , or nitric oxide with a content of  $10^{17}$  molecules in a column of unit cross-section. The latter  
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S/049/60/000/010/014/014

E032/E414

On the Absorption of Solar  $H\alpha$  Emission in the Earth's Atmosphere

corresponds to a reduced nitric oxide thickness of 0.004 cm (NTP). However, it is concluded that the absorption by atomic hydrogen is the most probable. This is supported by the following facts:

- 1)  $L\alpha$  emission by atmospheric layers below 120 km;
  - 2) the estimate of the number of NO molecules obtained from  $L\alpha$  absorption in the atmosphere is by an order of magnitude greater than that obtained from the ultraviolet data reported by Jursa et al (Ref.16);
  - 3) absorption by water vapour would require too high a concentration of this vapour between 80 and 100 km;
  - 4) hydroxyl emission is observed in the spectrum of the night sky at 75 to 80 km and this can only be produced in the presence of atomic hydrogen.
- The measured variation of intensity of  $H\alpha$  emission as a function of the mass of the atmosphere, as reported in the literature, is found to be roughly of a parabolic form and this is most easily explained by assuming that absorption is due to atomic hydrogen. Acknowledgments are expressed to G.S.Ivanov-Kholodny for his advice. There are 1 figure, 1 table and 19 references: 4 Soviet and 15 non-Soviet.

Card 5/6

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S/049/60/000/010/014/014  
E032/E414

On the Absorption of Solar  $H_{\alpha}$  Emission in the Earth's Atmosphere

ASSOCIATION: Akademiya nauk SSSR Institut prikladnoy geofiziki  
(Academy of Sciences USSR Institute of  
Applied Geophysics)

SUBMITTED: March 14, 1960

✓

Card 6/6



1 16551-1

ACCESSION NO. 1444

to D. L. is maintained with a 300v potential difference. It consists of a stainless steel tube 15cm in diameter. The tube is closed at both ends by Kovar discs. A 1000 ohm resistor is hermetically sealed to the frame with epoxy. The counter is connected to the resistor.

plateau is reached. The counting rate is then

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BABICHENKO, S.I.; KARPINSKIY, I.P.; KAPLAN, S.A.; KATYUSHINA, V.V.;  
KRYLOV, L.N.; KURT, V.G.; PUSTOVAYT, R.M.; SHIFRIN, A.V.

Studying the scattered ultraviolet radiation in the earth's upper  
atmosphere. Kosm.issl. 3 no.2:237-243 Mr-Apr '65.

(MIRA 18:4)

KATYUSHINA, V.V.; KURT, V.G.

Measurements of scattered  $\alpha$ -radiation in the upper atmosphere  
at altitudes up to 500 km. Izv. Akad. Nauk. 3 no.2:243-247 1965  
(MIRA 38:4)

KATYUSHINA, V.V.

Intensity measurements of the luminescence of the upper atmosphere  
based on the triplet lines  $OI(\lambda \sim 1300 \text{ \AA})$  at altitudes of 100 to  
500 km. Kosm.issl. 3 no.2:248-250 Mr-Apr '65.

(MIRA 18:4)

of less than 10%. Two experiments were conducted under identical

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... did not change appreciably during the

ADDITIONAL AT note

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SUN (10000000)

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45937-06 EWI(1) Gt

ACC NR: AF6028341

SOURCE CODE: UR/0293/66/004/004/0619/0629

AUTHOR: Katyushina, V. V.

ORG: none

TITLE: On the passage of solar radiation through the terrestrial atmosphere in the triplets of OI (1300 Å)

SOURCE: Kosmicheskiye issledovaniya, v. 4, no. 4, 1966, 619-629

TOPIC TAGS: ~~dispersed radiation~~, solar radiation, ~~zenithal distance~~, ~~radiation transfer~~, ~~monochromatic dispersion~~ *solar radiation intensity*

ABSTRACT: The results of computations of the intensity of scattered radiation in the lines of triplet OI ( $\lambda \sim 1300 \text{ Å}$ ) as a function of the optical thickness are presented. Computations are based on the equation of light scattering developed by Sobolev but adapted to the case of monochromatic dispersion. The absorption of radiation by molecular oxygen is also taken into account. A solution is found for different parameter values, and the results are presented graphically. The values obtained theoretically are found to be several times smaller than those obtained experimentally. The author thanks V. V. Ivanov, A. S. Kaplan, and L. V. Mayorov. Orig. art. has: 4 figures and 34 formulas.

[DM]

SUB CODE: 04/ SUBM DATE: 21Oct65/ ORIG REF: 005/ OTH REF: 012/ ATD PRESS: 5060

Cord 1/1 bs

UDC: 551.521.14

5/519/51/000/019/010/019  
B039/1112

AUTHORS: Borisevich, Ye.S.; Katyushkin, V.F.

TITLE: GB-type galvanometers for seismic oscillographs

Source: Akademiya nauk SSSR. Institut fiziki Zemli. Trudy, no. 19 (186).  
Moscow, 1961, Seysmicheskiye pribory, 69-72

TEXT: The authors discuss the characteristics of the ГБ (GB) series of galvanometers, developed at the Institut fiziki Zemli AN SSSR (Institute of Physics of the Earth, AS USSR) a few years ago, and their use in magnetoelectric oscillographs. This series includes the ГБ-III (GB-III), ГБ-IV-M (GB-IV-M) and ГБ-IV (GB-IV) galvanometers, all of them employing the electromagnetic mode of damping. The GB-IV galvanometers are now produced by the Kishinevskiy zavod elektroizmeritel'nykh priborov (Kishinev Electrical Measuring Instruments Plant) and the Moskovskiy radiomekhanicheskiy tekhnikum (Moscow Radiomechanical Tekhnikum). Small numbers of GB-III galvanometers are being turned out at the SKB of the Institute of Physics of the Earth, AS USSR. The GB-III and GB-IV-M galvanometers are interchangeable with the ГМЗ-46 (GEMZ-46) galvanometers used in the OT-24 (OT-24) and OE-24 ✓

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S/619/61/000/019/010/019  
E039/D112

GB-type galvanometers for .....

(OS-24) ~~unsymmetric~~ and seismic prospecting oscillographs. The GB-III galvanometers have been used in conjunction with the **ВЭГМК** (VEGIM) vibrographs for recording local earthquakes, industrial explosions and the vibrations of structures. In 1959, the Institute of Physics of the Earth, AS USSR, organized the production of the **ГБ-III-Б** (GB-III-B) galvanometers, having good integrating properties due to a relatively high critical resistance. This high critical resistance, however, hampers their application with the **СВК-М** (SVK-M) stationary seismographs, but can be reduced by over 6 times by removing the Armco iron core from an insert in the frame of the galvanometer, thus reducing the induction in the working gap by over 2.5 times, a fact discovered by the Tadzhikskaya kompleksnaya seysmologicheskaya ekspeditsiya (Tadzhik Comprehensive Seismological Expedition). This discovery led to the GB-III galvanometer being used as a basis for the new **ГБ-III-БС** (GB-III-BS) seismic galvanometers with parameters similar to those of the **ГК-VII** (GK-VII) stationary galvanometers. The GB-III-B and GB-III-BS galvanometers are small in size and are thus suitable for oscillographs. The **ГБ-III-БС, 8** (GB-III-BS-0.8) galvanometer has the parameters closest to those of the GK-VII, but is 15 mm longer than all other galvanometers of the GB-III-BS and GB-III-B series. As the GB-IV-M

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ACC NR: AR7C04305

AUTHOR: Katyushkin, V. G.

SOURCE CODE: UR/0271/66/000/011/A021/A022

TITLE: Semiconductor multichannel digital-analog converter with voltage memory

SOURCE: Ref. zh. Avtomat. telemekh. i vychisl. tekhn., Abs. 11A171

REF SOURCE: Sb. Vychisl. tekhn. v upr. M., Nauka, 1966, 191-196

TOPIC TAGS: digital analog converter, semiconductor converter, digital computer

ABSTRACT: A semiconductor multichannel digital-to-analog converter is described which was used jointly with a digital computer and which represents a "reflection" device. The required coordinates are recorded in the storage unit of the digital computer. Then, the storage cyclically delivers a parallel code which is fed to registers. From the latter, the signals go to summation matrices which produce analog voltages. These voltages -- via amplifiers -- are applied to voltage-storage units, from where the signals are fed to deflection devices. Circuits and individual assemblies of the converter are described. Six figures. T. R. [Translation of abstract]

SUB CODE: 09

Card 1/1

UDC: 62-52:681.142.621

L 21663-66

ACC NR: AP6001582

(A)

SOURCE CODE: UR/0120/65/000/006/0154/0157

AUTHOR: Katyushkin, V. G.; Momdzhhi, V. G.

ORG: Air-Force Engineering Academy (Voyenno-vozdushnaya inzhenernaya akademiya)

TITLE: Statistical study of delays between the firing and discharge impulses in ISSh 100-3 flash lamp

SOURCE: Pribory i tekhnika eksperimenta, no. 6, 1965, 154-157

TOPIC TAGS: flash lamp / ISSh 100-3 flash lamp

ABSTRACT: Generally, the time delay between the firing pulse and the flash-producing main discharge depends on: (1) Main-gap voltage; (2) Firing-gap energy; (3) Main-gap energy liberated during the preceding flash; (4) Time elapsed from the preceding flash; (5) Average power dissipated in the lamp. It is found that only the first factor has an important effect; the contribution of the other four factors is minor. At low (3-4 kv) main-gap voltages, the mean delay may reach a value as high as 100 microsec; at 6.25 kv, the delay is only 1 microsec; in the latter case,

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UDC: 621.32:535.89

I 21663-66

ACC NR: AP6001582

however, the probability of spurious discharge becomes serious. Histograms of distributions of delays, for four main-gap voltages, are constructed on the basis of 1500 experiments. The statistical-character spread determined on four lamps is found insignificant. The above data shows that the flash delay should often be taken into account when using ISSh 100-3 lamps in gating circuits. Orig. art. has: 5 figures.

SUB CODE: 09 / SUBM DATE: 30Nov64 / ORIG REF: 003 / OTH REF: 001

Card 2/2 *YC*

KLEYMAN, Ye.A.; KATYUZHANSKIY, G.A.

"Mathematical statistics in engineering" by A.M.Dlin. Reviewed  
by E.A.Kleiman, G.A.Kotuzhanskii. Standartizatsiia 25 no.12:55-  
56 D '61. (MIRA 14:11)

(Mathematical statistics)  
(Mechanical engineering)  
(Dlin, A.M.)

KATZ, A.

Protective device for fast chipping. p. 5. TEHNICA NOUA. (Asociatia Stiintifica a Inginerilor si Tehnicienilor) Bucuresti. Vol. 2, no. 27, Dec. 1955

So. East European Accessions List Vol. 5, No. 9 September, 1956

NAUR, Peter; BACKUS, J.W.; BAUER, L.F.; GREEN, J.; KATZ, C.; MCCARTHY, J.;  
PERLIS, A.J.; RUTISHAUSER, H.; SAMELSON, K.; VAUQUOIS, B.;  
WEGSTEIN, J.H.; WIJNGAARDEN, A., van; WOODGER, M.; REVESZ, Gyorgy  
[translator]

Report on the algorithmic language ALGOL 60. Mat. kut. kozl. MTA 6  
Series B no.4:425-465 '61.

1. ALGOL-bizottsag tagjai (for Backus, Bauer, Green, Katz,  
McCarthy, Perlis, Rutishauser, Samelson, Vauquois, Wegstein,  
Wijngaarden, Woodger). 2. Szerkeszto "Communications of the ACM"  
(for Naur). 3. Magyar Tudomanyos Akademia Szamitastechnikai Kozpont  
(for Revesz).

KATZ, D., Dr., medic primar.

Study of the physiopathological bases of a judicious therapy  
of auricular fibrillation. Med. int., Bucur. 8 no.3:443-451  
July 56.

(AURICULAR FIBRILLATION, therapy  
indic. & physiopathol. basis)

RUMANIA/Farm Animals - Honey-Bees

APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000721210005-3"

Author : Katz Francis  
Inst : Not Given

Title : Queen-Rearing in Multi-Compartment Nucloei (Opyt vyrashchivaniye  
matok v mnogokomestnykh nuklousakh)

Orig Pub : Apicultura, 1957, No 4, 20-23

Abstract : The article gives the description of a hive containing 10  
nucloei with 2 frames and 70 worker-bees in each. Towards  
the 20th of May, 8 fertilized queens were obtained. After  
5 days, a second batch of queen cells was put in, and in  
June all 22 queens were obtained.

Card : 1/1



SEEWALDT, Rolf, ing.; KATZ, Iosef, ing.

Safety engineering measures regarding the manual loading and unloading of materials. Rev transport 9 no. 11:493-495 N '62.

PROKOF'YEV, A.A.; KATZ, K.M.

Interdependence between the transpiration in leaves and fruit. Fiziol. rast. 11 no. 3:448-456 '64. (MIRA 17:7)

1. Institut fiziologii rasteniy imeni Timiryazeva AN SSSR, Moskva.

PICK, A.; LANGENDORF, R.; KATZ, L.N.

Aberrant ventricular conduction. Cas.lek.cesk. 99 no.20/21:628-634  
20 My '60.

1. Cardiovascular Department, Medical Research Institute, Michael  
Reese Hospital and Medical Center, Chicago, Illinois.  
(HEART BLOCK)

KATZ, M.Ya.; SHUTOV, V.D.

Specific weight of the grains of clastic quartz and its use  
as a correlation indication of arenaceous rocks. Lit. i pol.  
iskop. no.1:143-152 '63. (MIRA 17:3)

1. Geologicheskii institut AN SSSR.

KATZ, R.

Improvement of the methods for the planning and determination  
of the amortization of capital assets. Probleme econ 15 no.2;  
105-120 F '62.

KATZ, R.

On the revaluation of Rumanian basic funds. Probleme econ 16 no.1:  
29-43 Ja '63.

Katz, S.

RUMANIA/Chemical Technology, Chemical Products and Their  
Application, Part 4. - Cellulose and Its Derivatives,  
Paper.

H-33

Abs Jour: Referat. Zhurnal Khimiya, No 10, 1958, 34638.

Author : S. Katz.

Inst : Not given.

Title : Laboratory Data Concerning Cellulose Manufacturing of  
Reed by Monosulfite Method.

Orig Pub: Celuloza și hîrtie, 1956, 5, No 10, 274-277.

Abstract: The scheme of reed processing with Na sulfite moistened  
with  $\text{NaHCO}_3$  and the properties of the resulting pulp,  
as well as the effect of black neutral sulfite liquors  
at their application to this process on the properties  
of the resulting hemicellulose are described.

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42087

P/019/62/011/003/004/008  
D289/D308

9.3230

AUTHOR: Katz, S.

TITLE: Some physical aspects of transients in an artificial transmission line

PERIODICAL: Archiwum elektrotechniki, v. 11, no. 3, 1962, 431-439

TEXT: The author considers an artificial line consisting of LC circuits. The method of taking into account the damping in these circuits is discussed in general and illustrated by the example of a two-terminal network producing a rectangular pulse. The network consists of the LC circuits in parallel with each other and with a resistor  $R_0$ . Taking into account the interaction of the circuits the author obtains

$$i_1(p) = \frac{A_1(p)}{B(p)} ; i_2(p) = \frac{A_2(p)}{B(p)} ; i = \frac{A(p)}{B(p)} \quad (6)$$

$i_1$  and  $i_2$  being the currents in the circuits and  $i$  the total current.  
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Some physical aspects ...

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D289/D308

The fractions are polynomials in  $p$  and LC parameters of the circuits.  
For a rectangular pulse

$$L_1 = L_3 = \frac{R_0 \tau}{4} ; C_1 = \frac{4\tau}{\pi^2 R_0} ; C_3 = \frac{4\tau}{9\pi^2 R_0} . \quad (7)$$

where  $\tau$  is the pulse width. [Abstracter's note: The author uses index 3 for the LC parameters of the second circuit, but 2 for its current]. This leads to

$$\begin{aligned} A_1(p) &= \frac{4E\tau}{R_0} (p^2 \tau^2 + 9\pi^2) ; A_2(p) = \frac{4E\tau}{R_0} (p^2 \tau^2 + \pi^2) ; \\ A(p) &= \frac{8E\tau}{R_0} (p^2 \tau^2 + 5\pi^2) ; B(p) = p^4 \tau^4 + 8p^3 \tau^3 + 10\pi^2 p^2 \tau^2 + 40\pi^2 p \tau + 9\pi^4 \end{aligned} \quad (8)$$

Putting  $p\tau = s$  the author finds the original functions using approximate values of the zeros of  $B(s)$  obtained by Horner's method. For instance

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Some physical aspects ...

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D289/D308

$$i(t) = E/R_0 \left[ 2.5808e^{-2.506 t/\tau} \sin(2.4474 t/\tau - 0.1585) + \right. \\ \left. + 0.4548e^{-1.494 t/\tau} \sin(8.3197 t/\tau + 1.2402) \right]$$

Expressions for  $i_1$ ,  $i_2$ ,  $i$  are also deduced for the case when the interaction of the circuits is neglected. A graph of all results is given for comparison. It is concluded that the interaction is favorable for the formation of correct pulse shape. The damping parameters do not depend on the load  $R_0$  only if the actual load  $R$  is equal to the design value of  $R_0$ . Variations occurring in the case  $R \neq R_0$  are discussed. There are 5 figures. X

ASSOCIATION: Katedra techniki fal ultrakrotkich politechniki  
Warszawskiej (Department of Ultrashort Wave Technology of the Warsaw Polytechnic)

SUBMITTED: June 14, 1961

Card 3/3

KATS, N.Ya.; KATZ, S.V.; SALOV, I.N.

Russian-Wurmian (Mikulino) interglacial deposits in the Ryasna  
area, Ponizov'ye District, Smolensk Province. *Byul. MOIP. otd.*  
*geol.* 32 no.2:15-23 *Mr-Ap* '57. (MIRA 11:3)  
(Ponizov'ye District--Geobotany)

KATZARSKI, M.

On the measured and directly estimated capacity of the skull.  
Folia med. (Plovdiv) 6 no.1:1-7 '64

1. Higher Medical Institute "I.P.Pavlov" in Plovdiv, Bulgaria,  
Chair of Anatomy (Chief: Prof. D. Stanishev).

"APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000721210005-3

*REF ID: A66666*

APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000721210005-3"

KATZOULOV, At.

Bulgaria

No degree listed

Obstetrics-Gynecology Clinic at the Higher Medical Institute (Vissh Meditsinski Institut), Sofia; Department Head: Professor I. SHTURKALEV.

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